

CLAIMS

1 1. A method for providing Quality of Service (QoS) routing of a network packet, the
2 method comprising inserting a QoS code into an Internet Protocol (IP) address of the network
3 packet.

1 2. The method in accordance with claim 1 further comprising:
2 3 checking unused bits of the IP address to read the QoS code upon receiving the network
3 4 packet at an intermediate node on a network; and
4 5 re-transmitting the received network packet from the intermediate node with the QoS
5 6 indicated by the QoS code.

1 3. The method in accordance with claim 2 further comprising storing the QoS code in the
2 intermediate node.

1 4. The method in accordance with claim 1 wherein the IP address comprises an IP version 6
2 address.

1 5. A method for providing quality of service (QoS) routing of a network packet, the method
2 comprising:

3 4 checking unused bits of an Internet Protocol (IP) address associated with the network
4 5 packet to read a QoS code therein upon receiving the network packet at an intermediate node on
5 6 a network; and

6 7 re-transmitting the received network packet from the intermediate node with the QoS
7 8 indicated by the QoS code.

1 6 The method in accordance with claim 5 further comprising storing the QoS code in the
2 intermediate node.

1 7. The method in accordance with claim 6 wherein the IP address comprises an IP version 6
2 address.

1 8. A method for providing quality of service (QoS) routing of a network packet, the method
2 comprising:

3 associating one of a plurality of QoS codes with each of a plurality of QoS levels;

4 inserting one of the QoS codes into unused bits of an IPv6 address of the network packet;

5 checking the unused bits of the IPv6 address to read the QoS code therein upon receiving
6 the network packet at an intermediate node on a network; and

7 re-transmitting the received network packet from the intermediate node with the QoS
8 indicated by the QoS code.

1 9. The method in accordance with claim 8 further comprising the step of storing the QoS
2 code in the intermediate node.

1 10. Apparatus for providing Quality of Service (QoS) routing of a network packet, the
2 apparatus comprising means for inserting a QoS code into an Internet Protocol (IP) address of
3 the network packet.

1 11. The apparatus in accordance with claim 10 further comprising:

2 means for checking unused bits of the IP address to read the QoS code upon receiving the
3 network packet at an intermediate node on a network; and

4 means for re-transmitting the received network packet from the intermediate node with
5 the QoS indicated by the QoS code.

1 12. The apparatus in accordance with claim 11 further comprising means for storing the QoS
2 code in the intermediate node.

1 13. Apparatus for providing quality of service (QoS) routing of a network packet, the
2 apparatus comprising:

3 means for checking unused bits of an Internet Protocol (IP) address associated with the
4 network packet to read a QoS code therein upon receiving the network packet at an intermediate
5 node on a network; and

6 means for re-transmitting the received network packet from the intermediate node with
7 the QoS indicated by the QoS code.

1 14. The method in accordance with claim 13 further comprising means for storing the QoS
2 code in the intermediate node.

1 15. The method in accordance with claim 14 wherein the IP address comprises an IP version
2 6 address.

1 16. A computer readable medium containing executable instructions for providing Quality
2 of Service (QoS) routing of a network packet through a network, the executable program

3 instructions comprising program instructions for inserting a QoS code into an Internet Protocol
4 (IP) address of the network packet.

1 17. The computer readable medium in accordance with claim 16, wherein the executable
2 program instructions further comprise program instructions for associating one of a plurality of
3 QoS codes with each of a plurality of QoS levels.

1 18. The computer readable medium in accordance with claim 16, wherein the executable
2 program instructions further comprise program instructions for:

3 checking unused bits of the IP address to read the QoS code upon receiving the network
4 packet at an intermediate node on a network; and

5 re-transmitting the received network packet from the intermediate node with the QoS
6 indicated by the QoS code.

1 19. The computer readable medium in accordance with claim 18, wherein the executable
2 program instructions further comprises program instructions for storing the QoS code in the
3 intermediate node.

1 20. The computer readable medium in accordance with claim 19, wherein the IP address
2 comprises an IP version 6 address.

1 21. A computer readable medium containing executable instructions for providing Quality
2 of Service (QoS) routing of a network packet through a network, the executable program
3 instructions comprising program instructions for:

4 checking unused bits of an Internet Protocol (IP) address associated with the network
5 packet to read a QoS code therein upon receiving the network packet at an intermediate node on
6 a network; and

7 re-transmitting the received network packet from the intermediate node with the QoS
8 indicated by the QoS code.

1 22. The computer readable medium in accordance with claim 21, wherein the executable
2 program instructions further comprise program instructions for associating one of a plurality of
3 QoS codes with each of a plurality of QoS levels.

1 23. A method for providing Quality of Service (QoS) routing of a network packet through
2 intermediate nodes on a network, said method comprising the steps of:

3 checking unused bits of an Internet Protocol (IP) address associated with the network
4 packet to read a QoS code therein upon receiving the network packet at an intermediate node on
5 a network;

6 storing the network packets in queues based upon the QoS indicated by the QoS code;

7 reading said network packets from said queues in a preferential manner; and

8 re-transmitting the stored network packets read from the queues with the QoS indicated
9 by the QoS code.

1 24. The method in accordance with claim 23 further comprising the steps of:

2 associating one of a plurality of QoS codes with each of a plurality of QoS levels;

3 storing the plurality of QoS codes in the intermediate node; and

4 determining the QoS level that a network packet should be retransmitted with by using
5 the QoS code read from the network packet during the step of checking unused bits to identify
6 the associated QoS level.

1 25. The method in accordance with claim 24 wherein the IP address is an IP version 6
2 address.

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